

Figure 1
(Prior Art)

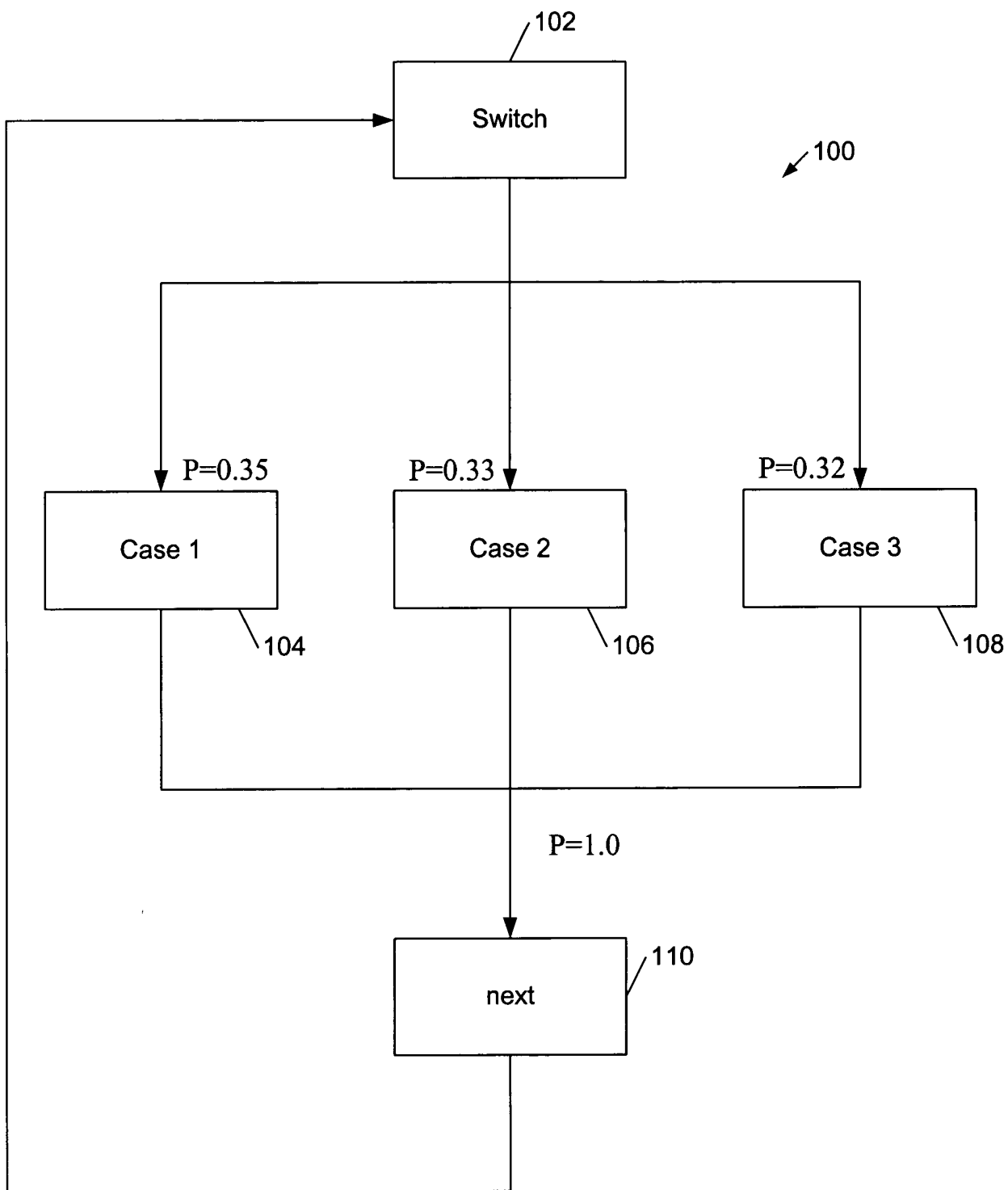
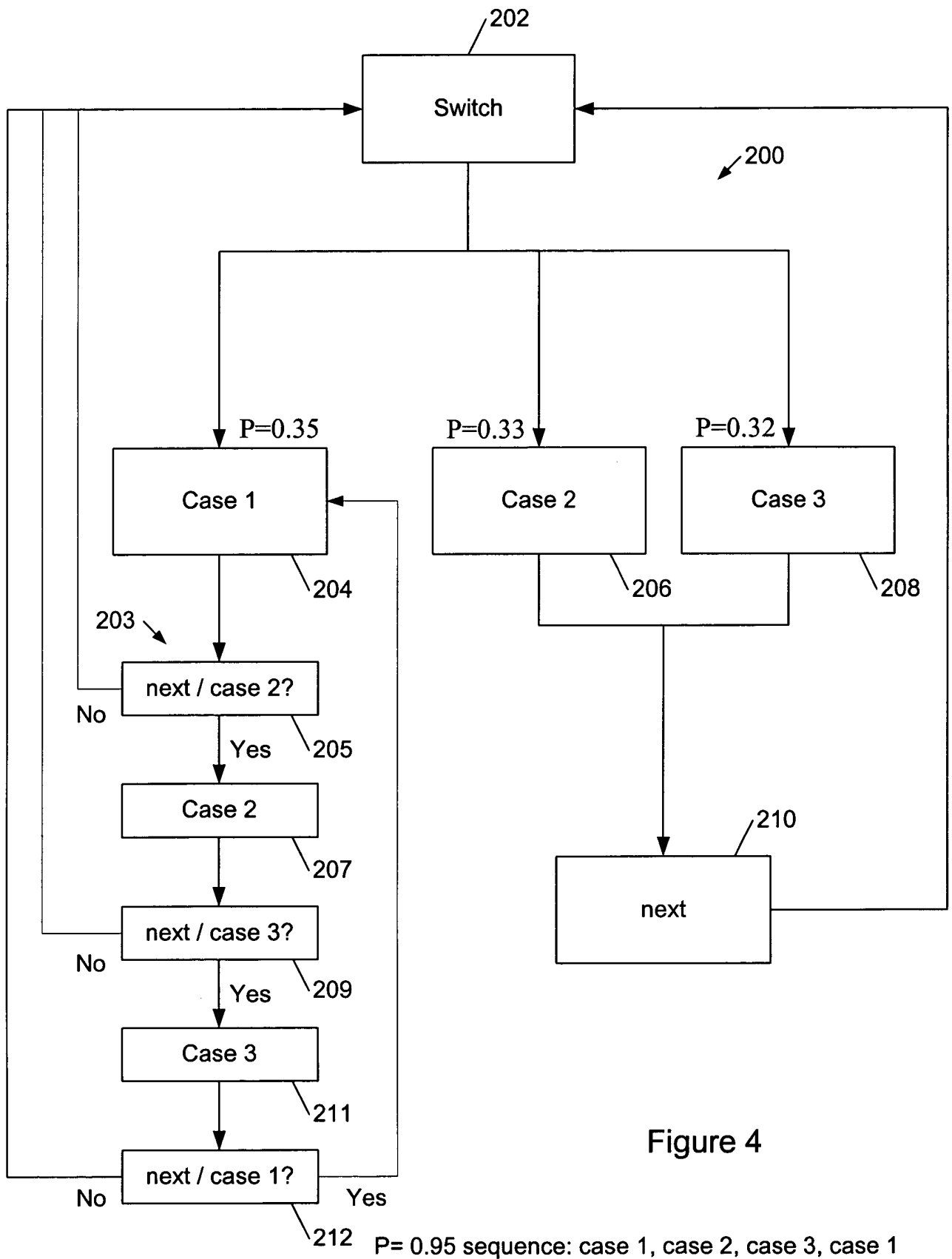


Figure 2
(Prior Art)

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```
ld [case], r1 /* next processing */
.switch:
cmp r1, 1
be .case1 P dynamic =0.65
nop
cmp r1,2
be .case2 P dynamic =0.51
nop
cmp r1,3
be .case3 P dynamic =1.00
nop
ba .defaultcase
```

Figure 3
(Prior Art)



Transformed Code

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```
.case1:  
/* case 1 code */  
ld [case], r1 /* expanded next */  
cmp r1, 2 /* case 2 test */  
bne .switch P dynamic =0.95  
Nop  
/* case 2 code */  
ld [case], r1 /* expanded next */  
cmp r1, 3  
bne .switch P dynamic =0.95  
Nop  
/* case 3 code */  
ld [case], r1 /* expanded next*/  
cmp r1, 1  
be .case1 P dynamic =0.95  
Nop  
Ba .switch
```

Branches executed
most often are
accurately predicted

Figure 5

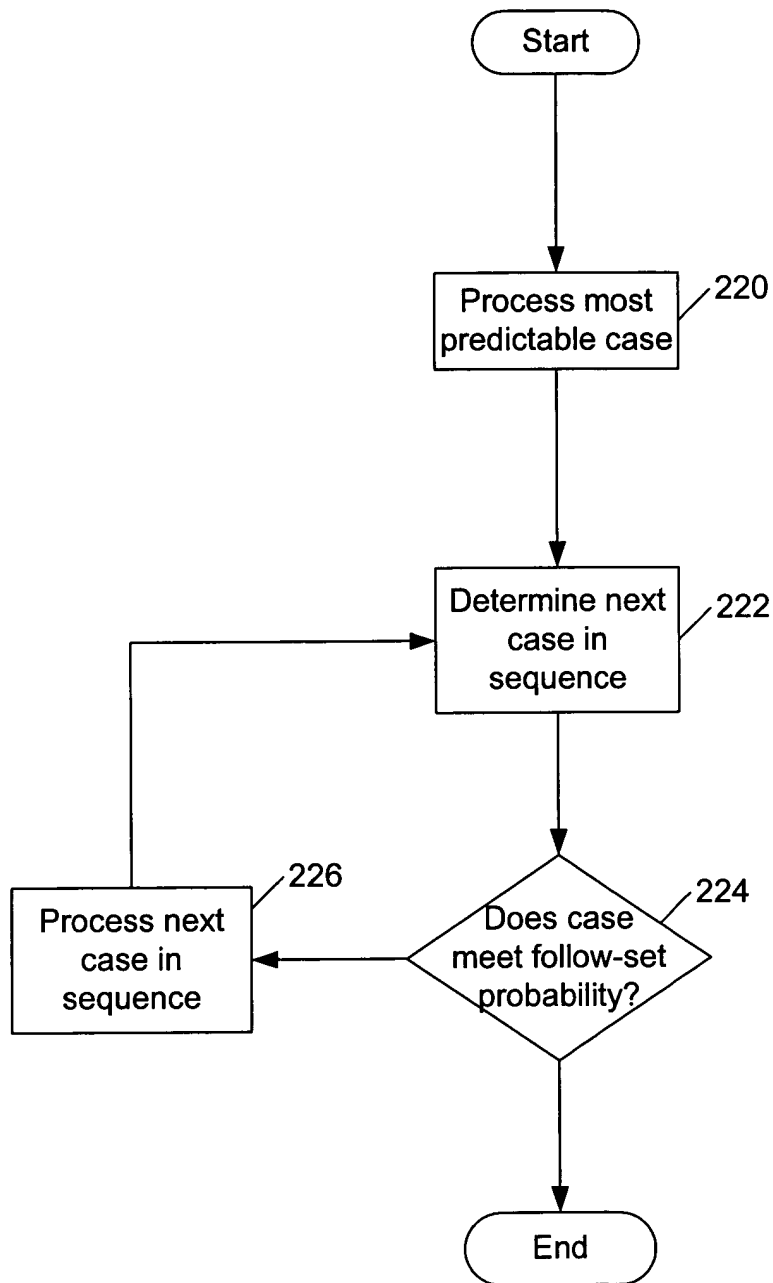


Figure 6

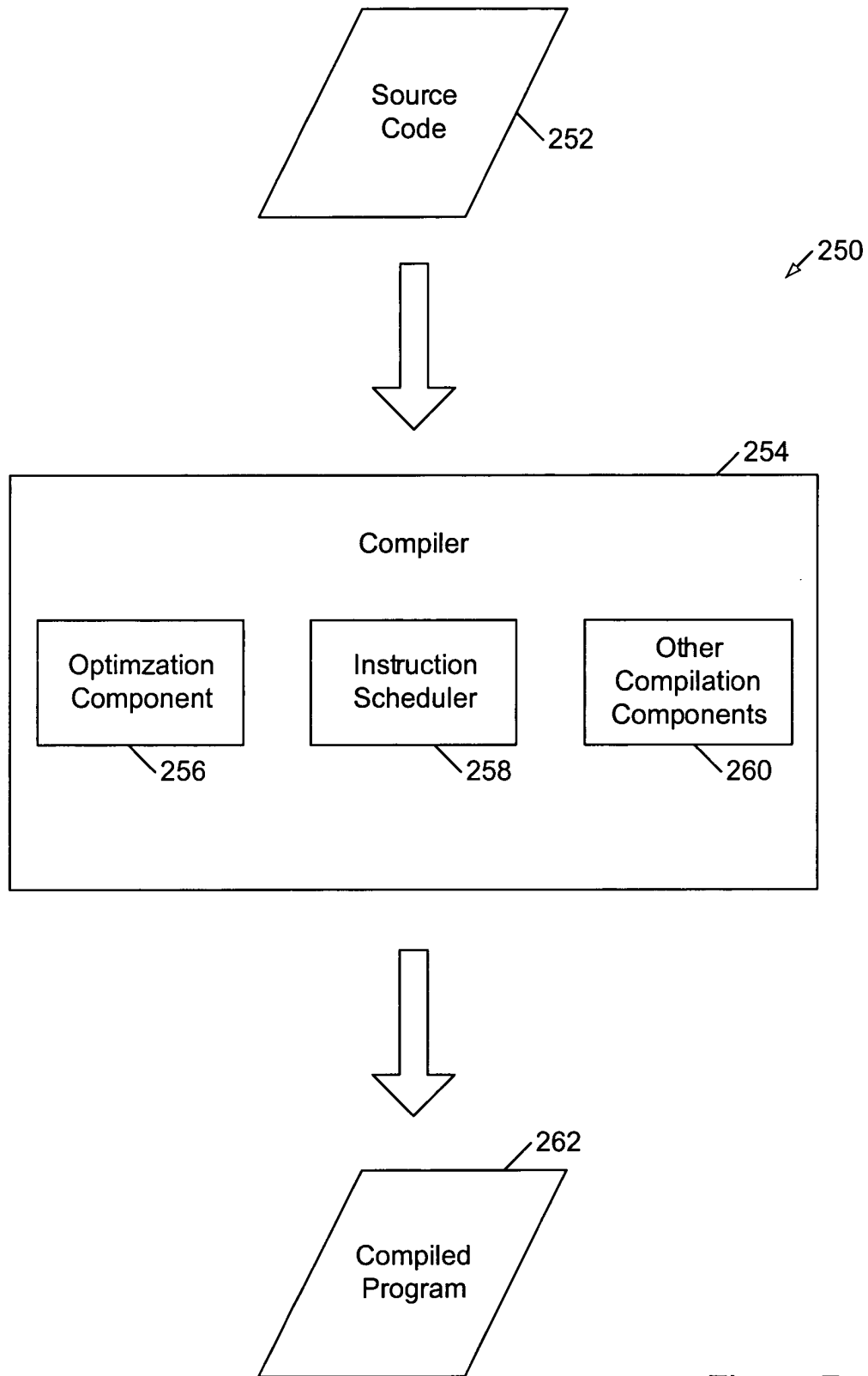


Figure 7

FIG. 8

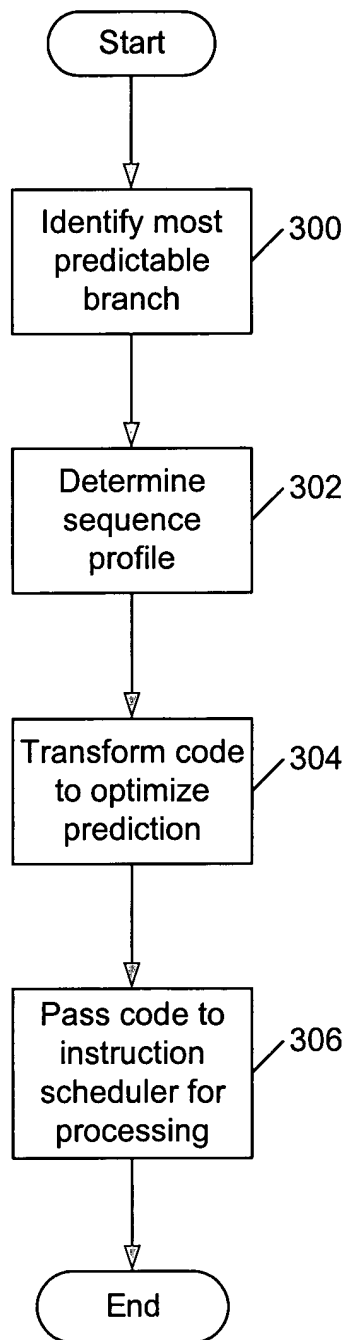


Figure 8